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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/700,188 | 11/03/2003 | Brian M. Conn | 45568-00450 | 3969 |

7590 06/03/2005

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EXAMINER

GILBERT, SAMUEL G

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

3736

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/700,188

Applicant(s)

CONN ET AL.

Examiner

Samuel G. Gilbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-21 is/are rejected.
- 7) ☒ Claim(s) 14-16 and 22-29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/1/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement filed 6/1/2004 has been considered.

Drawings

The drawings were received on 4/13/2004. These drawings are acceptable.

The drawings were received on 12/20/2004. These drawings are not acceptable because they do not include "Replacement Sheet" as required, see the following MPEP section.

MPEP 714...(d) Drawings. One or more application drawings shall be amended in the following manner: Any changes to an application drawing must be in compliance with § 1.84 and must be submitted on a replacement sheet of drawings which shall be an attachment to the amendment document and, in the header, labeled "Replacement Sheet." Any replacement sheet of drawings shall include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is amended. All changes to the drawing(s) shall be explained, in detail, in either the drawing amendment or remarks section of the amendment paper.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 8, 10-13, 17, 20 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Leysieffer(2002/0026091).

Claims 1, 10-12, 20, and 21 – Leysieffer teaches vibrating an ossicular bone with transducer –16-, sensing initial movement of the ossicular bone in the transducer using measuring system –25-, the examiner is taking the digital signal from the A/D converter as an electrical signal, set forth in paragraph [0089] and utilizing the signal to determine diagnostic information, this signal is used to determine the quality of coupling between the transducer and the ossicular chain element.

Claims 2 and 3 – the signal is sensed simultaneously which includes a first and second time interval wherein the first and second time interval overlaps.

Claims 4, 5, and 8 – coupling quality is determined, the examiner is taking coupling quality as a fitting parameter.

Claim 13 – the examiner is taking impedance as being related to the patient's auditory system.

Claim 17 – see element –10-

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 7, 9, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leysieffer (2002/0026091). Leysieffer teaches a method as claimed but does not specifically set forth determining underloading, overloading or repositioning the transducer. It is the examiner's position that coupling can have three states, underloaded, matched, and overloaded, therefore it is inherent that the device would determine if the transducer is overloaded or underloaded when it is not in a matched state, depending on the sensed signals. Further, when the transducer is not in the matched state one of ordinary skill in the art would find it obvious to reposition the transducer to find the matched state to optimize the coupling and therefore the functioning of the hearing aid system.

Claims 18 and 19 – Leysieffer teaches a method as claimed but does not set forth vibrating the skull or mechanically stimulating the tympanic membrane. The applicant is given official notice that mechanically stimulating the tympanic membrane and vibrating a portion of the skull to transmit vibrations to the middle ear are old and well known in the medical arts. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use mechanically stimulating the tympanic

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membrane or vibrating a portion of the skull to transmit vibrations to the middle ear in place of the introducing acoustic signals into an ear canal. The different methods may be used depending on the functioning of the patients hearing system. For example, if the patient tympanic membrane is totally inoperable one might select vibrating the skull to transmit vibrations to the middle ear and if the tympanic membrane is partially functioning one might select mechanically stimulating the tympanic membrane as a substitution of functionally equivalent method to deliver vibrations to the middle ear of the patient.

Allowable Subject Matter

Claims 14-16 and 22-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or fairly suggest a method as claimed including the steps of determining the mobility of the patient's ossicular chain or the steps of comparing the selected values as claimed.

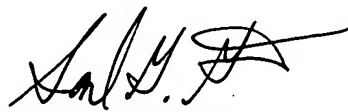
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U. S. Patent 5,833,626 and US Patent Application Publication 2002/0048374 teach related testing apparatus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel G. Gilbert whose telephone number is 571-272-4725. The examiner can normally be reached on Monday-Friday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenberg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Samuel G. Gilbert
Primary Examiner
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